

132. (Amended) The polarizer according to claim 97, wherein the thickness of the birefringent and anisotropically absorbing layer is such that the output of the polarizer coincides with an interference minimum for a first linearly-polarized light component and with an interference maximum for a second linearly-polarized light component that is orthogonal to the first linearly-polarized light component.

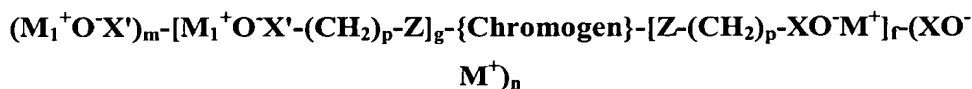
133. (Amended) The polarizer according to any one of claims 97, 130, or 132, further comprising an optically isotropic layer whose refractive index coincides with, or is maximally proximate to, a refractive index of the birefringent and anisotropically absorbing layer.

134. (Amended) The polarizer according to any one of claims 97, 130, or 132, further comprising a second birefringent layer having a second refractive index that coincides with, or is maximally proximate to, the first refractive index of the birefringent and anisotropically absorbing layer, wherein the second refractive index of the birefringent layer is different from the first refractive index of the birefringent and anisotropically absorbing layer.

135. (Amended) The polarizer according to claim 97, wherein the at least one birefringent and anisotropically absorbing layer is formed of:

at least one organic salt of a dichroic anionic dye having the general formula: {Chromogen}-(XO<sup>-</sup>M<sup>+</sup>)<sub>n</sub>; wherein {Chromogen} is a dye chromophore system; wherein each X = CO, SO<sub>2</sub>, OSO<sub>2</sub>, or OPO(O<sup>-</sup>M<sup>+</sup>); and wherein each M is independently RR'NH<sub>2</sub>, RR'R''NH, RR'R''R<sup>N</sup>, or RR'R''<sup>P</sup>; wherein each of R, R', R'', and R<sup>N</sup> is independently CH<sub>3</sub>, ClC<sub>2</sub>H<sub>4</sub>, C<sub>2</sub>H<sub>5</sub>, C<sub>3</sub>H<sub>7</sub>, C<sub>4</sub>H<sub>9</sub>, C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>, a substituted phenyl or heteroaryl group, YH-(CH<sub>2</sub>-CH<sub>2</sub>-Y)<sub>m</sub>-CH<sub>2</sub>CH<sub>2</sub> such that Y = O or NH and such that m = 0-5, N-alkylpyridinium, N-alkylchinolinium, N-alkylimidazolium, or N-alkylthiazolinium; and wherein n = 1-7;

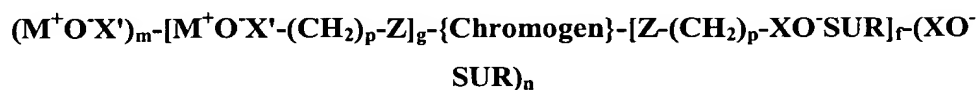
at least one asymmetric mixed salt of a dichroic anionic dye with different cations having the general formula:



wherein {Chromogen} is a dye chromophore system; wherein each Z is independently SO<sub>2</sub>NH, SO<sub>2</sub>, CONH, CO, O, S, NH, or CH<sub>2</sub>; wherein each p is independently from 1-

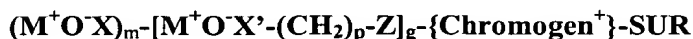
10; wherein each of f, g, n, and m are independently 0-9, wherein each of (n+f) and (m+g) are independently 1-10; wherein each of X and X' are independently CO, SO<sub>2</sub>, OSO<sub>2</sub>, or PO(O<sup>-</sup> M<sup>+</sup>); wherein M ≠ M<sub>1</sub>, and wherein each M and M<sub>1</sub> are independently H, an inorganic cation selected from the group consisting of NH<sub>4</sub>, Li, Na, K, Cs, Mg, Ca, Ba, Fe, Ni, and Co, an organic cation selected from the group consisting of RNH<sub>3</sub>, RR'NH<sub>2</sub>, RR'R''NH, RR'R''R\*N, and RR'R''R\*P, such that each of R, R', R'', R\* are independently alkyl or substituted alkyl groups selected from the group consisting of CH<sub>3</sub>, ClC<sub>2</sub>H<sub>4</sub>, HOC<sub>2</sub>H<sub>4</sub>, C<sub>2</sub>H<sub>5</sub>, C<sub>3</sub>H<sub>7</sub>, and C<sub>4</sub>H<sub>9</sub>, C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>, a substituted phenyl or heteroaryl group, YH-(CH<sub>2</sub>-CH<sub>2</sub>-Y)<sub>k</sub>-CH<sub>2</sub>CH<sub>2</sub> such that each Y is independently O or NH and such that k = 0-10, or a heteroaromatic cation selected from the group consisting of N-alkylpyridinium, N-alkylchinolinium, N-alkylimidazolinium, and N-alkythiazolinium;

at least one associate of a dichroic anionic dye with a surface-active cation and/or an amphoteric surfactant having the general formula:



wherein {Chromogen} is a dye chromophore system; wherein each Z is independently SO<sub>2</sub>NH, SO<sub>2</sub>, CONH, CO, O, S, NH, or CH<sub>2</sub>; wherein each p is independently from 1-10; wherein each of f and n are independently 0-4; wherein each of g and m are independently 0-9; wherein (n+f) = 1-4; wherein (m+g) = 0-9; wherein each X and X' are independently CO, SO<sub>2</sub>, OSO<sub>2</sub>, or PO(O<sup>-</sup> M<sup>+</sup>); wherein each M is independently H, an inorganic cation selected from the group consisting of NH<sub>4</sub>, Li, Na, K, Cs, Mg, Ca, Ba, Fe, Ni, and Co, an organic cation selected from the group consisting of RNH<sub>3</sub>, RR'NH<sub>2</sub>, RR'R''NH, RR'R''R\*N, and RR'R''R\*P, where each of R, R', R'', R\* are independently an alkyl or substituted alkyl group selected from the group consisting of CH<sub>3</sub>, ClC<sub>2</sub>H<sub>4</sub>, HOC<sub>2</sub>H<sub>4</sub>, and C<sub>2</sub>H<sub>5</sub>-C<sub>10</sub>H<sub>21</sub>, C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>, a substituted phenyl or heteroaryl group, YH-(CH<sub>2</sub>-CH<sub>2</sub>-Y)<sub>k</sub>-CH<sub>2</sub>CH<sub>2</sub> such that each Y is independently O or NH and such that k = 0-10, a heteroaromatic cation selected from the group consisting of N-alkylpyridinium, N-alkylchinolinium, N-alkylimidazolinium, N-alkythiazolinium, and K'SUR<sup>+</sup>; wherein each SUR is independently KSUR<sup>+</sup>, K'SUR<sup>+</sup>, or AmSUR; wherein KSUR<sup>+</sup> and K'SUR<sup>+</sup> are surface-active cations; and wherein AmSUR is an amphoteric surfactant;

at least one associate of a dichroic cationic dye with a surface-active anion and/or an amphoteric surface-active dye having the general formula:



wherein {Chromogen<sup>+</sup>} is a dye chromophore system; wherein each Z is independently SO<sub>2</sub>NH, SO<sub>2</sub>, CONH, CO, O, S, NH, or CH<sub>2</sub>; wherein each p is independently from 1-10; wherein each of g and m are independently 0-1, such that m+g=1; wherein each of X and X' are independently CO, SO<sub>2</sub>, OSO<sub>2</sub>, or PO(O<sup>-</sup>M<sup>+</sup>); wherein each M is independently H, an inorganic cation selected from the group consisting of NH<sub>4</sub>, Li, Na, K, Cs, Mg, Ca, Ba, Fe, Ni, and Co, an organic cation selected from the group consisting of RNH<sub>3</sub>, RR'NH<sub>2</sub>; RR'R''NH, RR'R''R\*N, and RR'R''R\*P; wherein each of R, R', R'', and R\* are independently an alkyl or substituted alkyl group selected from the group consisting of CH<sub>3</sub>, ClC<sub>2</sub>H<sub>4</sub>, HOC<sub>2</sub>H<sub>4</sub>, and C<sub>2</sub>H<sub>5</sub>-C<sub>10</sub>H<sub>21</sub>, C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>, a substituted phenyl or heteroaryl group, YH-(CH<sub>2</sub>-CH<sub>2</sub>-Y)<sub>k</sub>-CH<sub>2</sub>CH<sub>2</sub> such that each Y is independently O or NH and such that k = 0-10, a heteroaromatic cation selected from the group consisting of N-alkylpyridinium, N-alkylchinolinium, N-alkylimidazolinium, N-alkylthiazolinium and KSUR<sup>+</sup>; wherein KSUR<sup>+</sup> is a surface-active cation; wherein SUR = ASUR or AmSUR; wherein ASUR<sup>+</sup> is surface active cation; and wherein AmSUR is an amphoteric surfactant;

at least of one associate of a dichroic cationic dye with a surface-active cation and/or an amphoteric surfactant having the general formula:



wherein {Chromogen} is a dye chromophore system; wherein each Z is independently SO<sub>2</sub>NH, SO<sub>2</sub>, CONH, CO, O, S, NH, or CH<sub>2</sub>; wherein each p is independently from 1-10; wherein each X is independently N or P; wherein each of R, R', and R'' are independently an alkyl or substituted alkyl group selected from the group consisting of CH<sub>3</sub>, ClC<sub>2</sub>H<sub>4</sub>, HOC<sub>2</sub>H<sub>4</sub>, C<sub>2</sub>H<sub>5</sub>, and C<sub>3</sub>H<sub>7</sub>; wherein each SUR is independently ASUR<sup>-</sup> or AmSUR; wherein ASUR<sup>-</sup> is a surface-active anion; wherein AmSUR is an amphoteric surfactant; and wherein n = 1-4;

at least one water-insoluble dichroic dye and/or pigment that do(es) not contain ionogenic or hydrophilic groups;

at least one low-molecular weight thermotropic liquid-crystal

substance being a dichroic dye or containing, as a component, a liquid-crystal and/or a dichroic dye other than a liquid-crystal dye, wherein the at least one low-molecular weight thermotropic liquid-crystal substance is vitrified;

at least one polymer material other than liquid-crystal polymer material, having a controlled degree of hydrophilicity and having been dyed with a dichroic dye and/or an iodine compound;

at least one polymer thermotropic liquid-crystal and/or non-liquid-crystal substance comprising solved in mass and/or chemically bonded with a polymer chain dichroic dyes;

at least one dichroic dye capable of forming a lyotropic liquid-crystal phase;

at least one polymeric dichroic dye;

at least one water-soluble organic dye capable of forming a stable lyotropic liquid-crystal phase having the general formula: **{Chromogen}-(SO<sub>3</sub>M)<sub>n</sub>**, wherein {Chromogen} is a dye chromophore system; wherein each M is independently H or an inorganic cation; and wherein n = 1 to 7; or  
a mixture thereof.

Please also add the following new claim:

172. (New) The polarizer according to any one of claims 97, 130, or 132, wherein the first refractive index of the at least one birefringent and anisotropically absorbing layer has a maximal value of at least 1.9.